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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Date Submitted: July 20, 2006

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1 of 1

Complete if Known

Application Number	10/810,333
Filing Date	3/25/2004
First Named Inventor	Alan J. HEEGER
Group Art Unit	1634
Examiner Name	Robert Thomas Crow
Attorney Docket Number	327823-1052

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
RTC	1	2002-0006617		Fan et al.	01-2002	
	2	2001/0024788		Hashimoto, Koji	09-2001	
	3	6,451,588		Egholm et al.	09-2002	
	4	2002/0012930		Rothberg et al.	01-2002	
RTC	5	6,350,580		Sorge, Joseph A.	02-2002	

UNPUBLISHED U.S. PATENT APPLICATION DOCUMENTS

Examiner Initials*	Cite No. ¹	U.S. Patent Application Document		Name of Patentee or Applicant of Cited Document	Filing Date of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Serial Number	Kind Code ² (if known)			

FOREIGN PATENT DOCUMENTS

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		Office ³	Number ⁴	Kind Code ⁵ (if known)				
RTC	6		WO 01/40511	A2	Lee et al.	06-2001		

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶

Examiner Signature

/Robert Crow/

Date Considered

08/03/2006

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¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

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ATTY. DOCKET NO.

327823-1052

SERIAL NO.

10/810,333

APPLICANT

Alan J. HEEGER et al.

FILING DATE

3/25/2004

GROUP ART UNIT

1634

INFORMATION DISCLOSURE CITATION

APR 10 2006

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U.S. PATENT DOCUMENTS

EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE

FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION	
							YES	NO
RTC	B1	WO/1999/57317	11/11/1999	PCT				

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

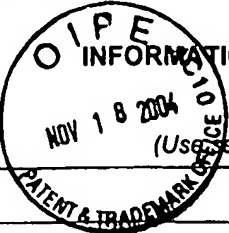

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Form PTO-1449 (MODIFIED)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. 327823-1052		SERIAL NO. 10/810,333	
 <p>INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)</p>				APPLICANT Alan J. HEEGER et al.			
				FILING DATE 3/25/2004		GROUP ART UNIT 1634	
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE
		5,139,812	8/8/1992	Lebacq, Philippe	427	7	
FOREIGN PATENT DOCUMENTS							
	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION YES NO
	B1	CN1422960	6/11/03	China [English Abstract]	Abstract	only	X
	B2	CN1422961	6/11/2003	China [English Abstract]	Abstract	only	X
RTC	B3	WO/04/035929	4/29/2004	Japan			X
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)							
RTC	C1	Kuh, et al. „Electrochemical DNA analysis comes of age" <i>Nature Biotech</i> 18:1042-1043 (2000)					
	C2	Willner, Itamar "Biomaterials for Sensors, Fuel Cells, and Circuitry" <i>Science</i> 298:2407-2408 (2002)					
	C3	Fritz, et al. "Electronic detection of DNA by its intrinsic molecular charge" <i>Proc. Natl. Acad. Sci., USA</i> 99(22):4142-4146 (2002).					
	C4	Brazill, et al. "Capillary Gel Electrophoresis with Sinusoidal Voltammetric Detection: A Strategy To Allow Four-Color DNA Sequencing" <i>Anal. Chem.</i> 73:4882-4890 (2001)					
	C5	Palecek, et al. "Electrochemistry of Nucleic Acids and Development of DNA Sensors" <i>Crit. Rev. Anal. Chem.</i> 32(3):261-270 (2002)					
	C6	Millan et al. "Sequence-Selective Biosensor for DNA Based on Electroactive Hybridization Indicators" <i>Anal. Chem.</i> 65:2317-2323 (1993)					
RTC	C7	Kelley, et al. "Single-base mismatch detection based on charge transduction through DNA" <i>Nucleic Acids Res.</i> 27(24):4830-4837 (1999)					
EXAMINER /Robert Crow/				DATE CONSIDERED 08/03/2006			
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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)							
RTC	C8	Ihara et al. "Ferrocene-oligonucleotide conjugates for electrochemical probing of DNA" <i>Nucleic Acids Res</i> 24(21):4273-4280 (1996)					
	C9	Yu, et al. "Electronic Detection of Single-Base Mismatches in DNA with Ferrocene-Modified Probes: <i>J. Am. Chem. Soc.</i> 123:11155-11161 (2001)					
	C10	Umek et al. "Electronic Detection of Nucleic Acids" <i>J. Mol. Diag.</i> 3(2):74-84 (2001)					
	C11	Park et al. "Array-Based Electrical Detection of DNA with Nanoparticle Probes" <i>Science</i> 295:1503-1506 (2002)					
	C12	Korri-Yousoufi, et al. "Toward Bioelectronics: Specific DNA Recognition Based on an Oligonucleotide-Functionalized Polypyrrole" <i>J. Am. Chem. Soc.</i> 119:7388-7389 (1997)					
	C13	Clelland et al. "Hiding messages in DNA microdots" <i>Nature</i> 399:533-534 (1999)					
	C14	Cox et al. "Bar coding objects with DNA" <i>Analyst</i> 126:545-547 (2001)					
	C15	Fan et al. "Spectroscopy and Electrochemistry of the Covalent Pyridine-Cytochrome c Complex and a Pyridine-Induced, "Alkaline-like" Conformation" <i>J. Phys. Chem. B</i> 106:11375-11383 (2002)					
	C16	Hirst, J. et al. "Kinetics and Mechanism of Redox-Coupled, Long-Range Proton Transfer in an Iron-Sulfur Protein. Investigation by Fast-Scan Protein-Film Voltammetry" <i>J. Am. Chem. Soc.</i> 120:7085-7094 (1998)					
	C17	Tyagi et al. "Molecular Beacons: Probes that Fluoresce upon Hybridization" <i>Nat. Biotechnol.</i> 14:303-308 (1996)					
	C18	Boon et al. "An electrical probe of protein-DNA interactions on DNA-modified surfaces" <i>Nat. Biotechnol.</i> 20:282-286 (2002)					
	C19	O'Sullivan, et al. "Aptasensors – the future of biosensing?" <i>Anal. Bioanal. Chem.</i> 372:44-48 (2002)					
	C20	Robertson et al. "In vitro selection of an allosteric ribozyme that transduces analytes to amplicons" <i>Nature Biotech</i> 17:62-66 (1999)					
	C21	Stojanovic et al. "Fluorescent Sensors Based on Aptamer Self-Assembly" <i>J. Am. Chem. Soc.</i> 122:11547-11548 (2000)					
	C22	Cook et al. "Methylated DNA labels for marking objects: <i>Biotechnol. Lett</i> 25:89-94 (2003)					
↓ RTC	C23	Immoos et al. "Characterization of Immobilized DNA Hairpins Containing Tethered Redox Probes" <i>Dept. of Chemistry, Duke University, P.M. Gross Laboratory, Durham, NC</i>					
EXAMINER /Robert Crow/				DATE CONSIDERED 08/03/2006			
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